5.14 WORKER SAFETY

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5.14 WORKER SAFETY

This section describes systems and procedures that will be implemented to provide occupational safety and health protection for the project workers in accordance with applicable laws, ordinances, regulations and standards (LORS). Employers in California are required to provide and maintain a safe and healthful workplace. California's Occupational Health and Safety Act of 1973 established the California Occupational Safety and Health Administration (Cal-OSHA) as the state agency responsible for oversight of workplace safety.

Applicable safety elements of Title 8 California Code of Regulations (CCR), General Industry Safety Orders (GISO), Construction Safety Orders (CSO), and Electrical Safety Orders (ESO) are addressed in this section.

5.14.1 Affected Environment

The Tesla Power Project (TPP) includes the construction and operation of a natural gas fired power plant facility, transmission lines, and pipelines. The physical plant layout is provided in Figure 3.4-1 (see Section 3.0). Fire protection systems are described in Section 3.4.10. Anticipated hazardous materials use and storage are listed in Table 3.4-17.

5.14.1.1 Workplace Hazards

Table 5.14-1 provides a hazard analysis that identifies the anticipated hazards to be encountered during construction and operation of TPP.

5.14.1.2 Health and Safety Programs (Construction and Operation)

During the construction and operation of TPP, health and safety programs designed to avoid or reduce hazards and comply with applicable regulations will be implemented to protect the safety and health of the workers. Safety programs will be initiated during construction of TPP. Upon completion of construction and implementation of routine operations at TPP, the construction safety and health program will transition into an operations-oriented program to reflect the hazards and controls necessary during routine operations. Program outlines for the Injury and Illness Prevention Plan (IIPP), Fire Protection and Prevention Program, Emergency Action Plan, and Personal Protective Equipment (PPE) Program that will be implemented are provided below.

Injury and Illness Prevention Plan

- Personnel with the Responsibility and Authority for Implementing the Plan.
- Safety and Health Policy.
- Work Rules and Safe Work Practices.
- System for Ensuring that Employees Comply with Safe Work Practices.
- Employee Communications.
- Identification and Evaluation of Workplace Hazards.

Table 5.14-1. Construction, Operation, and Maintenance Hazard Analysis

Activity	Exposure Potential	Hazard[1]	Control
Heavy Equipment Use	C, O, M	Employee injury and property damage from collisions between people and equipment.	Heavy Equipment Safety Program
Forklift Operation	C, O, M	Same as heavy equipment.	Forklift Operator Certification
Trenching and Excavation	C, O, M	Employee injury and property damage from the collapse of trenches and excavations.	Trenching and Excavation Safety Program Use of Excavation Permits per Cal-OSHA
Working at Elevated Locations	C, O, M	Falls from same level and elevated areas.	100% Fall Protection Program Scaffolding Safety Program
Use of Cranes or Derricks	C, O, M	Property damage from falling loads. Employee injuries from falling loads. Injuries and property damage from contact with cranes or derricks.	Use of crane permits as required per Cal-OSHA Hoisting and Rigging Safety Program Crane Inspections / Certifications Lifting Plans
Working with Flammable and Combustible Liquids	C, O, M	Fire/Explosion.	Flammable and Combustible Liquid Storage and Handling Program Fire Prevention Program Fire Protection Program Housekeeping Policy and Program Hot Work Permit Program
Hot Work (including Cutting and Welding)	C, O, M	Employee injury and property damage from fire. Exposure to fumes during cutting and welding. Ocular exposure to ultraviolet and infrared radiation during cutting and welding. Compressed gas cylinders. Electric shocks and burns.	Hot Work Permit Program Respiratory Protection Program Industrial Hygiene Monitoring Program PPE Program Housekeeping Policy and Program Compressed Gas Cylinders Safety Electrical Safety Program
Troubleshooting and Maintenance of Plant Systems and General Construction Activities	C, O, M	Employee injury and property damage from contact with hazardous energy sources (electrical, thermal, mechanical, etc.)	Hazardous Energy Control (Lockout/Tagout) Program PPE Program Hard Hats, Safety Shoes and Glasses
Working on Electrical Equipment and Systems	C, O, M	Employee contact with live electricity.	Qualified Electricians/Contractors Electrical Safety Program PPE Program Hazardous Energy Control (Lockout/Tagout) Program
Working with Hazardous Materials and Hazardous Waste	C, O, M	Employee injury due to ingestion, inhalation, and/or dermal contact.	HAZWOPER Training Hazard Communication Program

Table 5.14-1. Construction, Operation, and Maintenance Hazard Analysis (Continued)

Activity	Exposure Potential	Hazard[1]	Control
Concrete/Forms Work	C	Employee injury due to work at height, slips, trips, and falls.	Wear fall protection when working at height, protect exposed rebar, and maintain good housekeeping
Confined Space Entry	C, O, M	Employee injury from physical and chemical hazards.	Permit Required Confined Space Entry Program
General Construction Activities and Operations	C, O, M	Employee injuries from hand and portable power tools.	Hand and Portable Power Tool Safety Program PPE Program
		Employee injury and property damage from inadequate walking and work surfaces.	Housekeeping Policy and Program Site Inspection Program
		Employee overexposure to occupational noise.	Hearing Conservation Program PPE Program
		Employee injury from improper lifting and carrying of materials and equipment.	Safe Lifting Program Provision of Adequate Material Handling Equipment
		Employee injury and property damage from unsafe driving.	Safe Driving Program Restricted Vehicle Access to Construction Site Designated Vehicle Traffic Routes
		Employee overexposure to hazardous gases, vapors, dusts, and fumes.	Hazard Communication Program Respiratory Protection Program PPE Program Industrial Hygiene Exposure Monitoring
Construction, Testing, Troubleshooting, Maintenance and Repair of High Pressure Steam and Air Systems		Employee injury and property damage due to failure of pressurized system components or unexpected release of pressure.	Installation of Proper Relief Valving and Institution of a Relief Valve Maintenance and Testing Program Proof Testing of Pressure System Components Hazardous Energy Control (Lockout/Tagout) Program Line Breaking Safety Program

[1] The hazard and hazard controls provided are generic to construction and operational activities. As the design and construction of the facility proceeds, these analyses will be updated to reflect current conditions and knowledge.

HAZWOPER = Hazardous Waste Operation Emergency Response.
C = Construction Phase.
M = Maintenance Activities.
O = Operational Phase.

- Methods and/or Procedures for Correcting Unsafe or Unhealthy Conditions, Work Practices and Work Procedures in a Timely Manner, based on the Severity of the Hazards.
- Specific Safety Procedures (e.g., Fall Protection, Lockout/Tagout, Respiratory Protection).
- Training and Instruction.

Fire Protection and Prevention Program

- General Requirements.
- Fire Hazard Inventory, including Ignition Sources and Mitigation.
- Housekeeping.
- Employee Alarm/Communication System.
- Portable Fire Extinguishers.
- Fixed Fire Fighting Equipment.
- Fire Control/Emergency Response.
- Flammable and Combustible Liquid Storage.
- Use of Flammable and Combustible Liquids.
- Dispensing and Disposal of Flammable and Combustible Liquids.
- Training.
- Personnel to Contact for Information on the Plan Contents.

Emergency Action Plan

- Emergency Escape Procedures and Emergency Escape Route Assignments.
- Procedures to be Followed by Employees Who Remain to Operate Critical Plant Operations Before They Evacuate.
- Procedures to Account for All Employees After Emergency Evacuation has been Completed.
- Rescue and Medical Duties for Those Employees Who are to Perform Them.
- Fire and Emergency Reporting Procedures.
- Alarm and Communication System.
- Personnel to Contact for Information on the Plan Contents.
- Spill Prevention/Control and Countermeasure Plan.

Personal Protective Equipment Program

- Hazard Analysis and Prescription of PPE.
- Personal Protective Devices.
- Head Protection – American National Standards Institute (ANSI)-Approved Hard Hats Mandatory.
- Eye and Face Protection – ANSI-Approved Safety Eyewear Mandatory.
- Body Protection.
- Hand Protection.
- Foot Protection – ANSI-Approved Safety Footwear Mandatory.
- Sanitation.
- Full Body Harnesses and Life Lines.
- Protection for Electric Shock.
- Medical Services and First Aid/Blood-borne Pathogens.
- Respiratory Protective Equipment.
- Training, Workplace Evaluation.

5.14.1.3 Safety Training Programs

To ensure that employees recognize and understand how to protect themselves from hazards, TPP will verify that the contract companies selected to perform work during the construction phase have comprehensive training programs for their employees and that those employees have received the training necessary to perform their work safely.

Table 5.14-2 provides an overview of safety training programs that will be required for construction and operations personnel.

5.14.2 Mitigation Measures

Construction and operation of the proposed facility could lead to significant impacts to worker safety. Implementation of the following mitigation measures will reduce potential impacts to a level of insignificance.

Construction Phase

Construction Field Safety Plan. The Applicant will prepare a Construction Field Safety Plan prior to beginning construction work at the site. The Field Safety Plan will include a job hazard analysis, use of PPE, fire suppression and prevention plan, and identification of fire suppression support services to be used.

Table 5.14-2. Construction and Operation Training Program

Training Course	Project Phase	Target Employees
Injury and Illness Prevention Plan	C, O, M	All.
Emergency Action Plan	C, O, M	All.
PPE Program	C, O, M	All.
Heavy Equipment Safety Program		Employees working on, near, or with heavy equipment.
Forklift Operator Training	C, O, M	Employees working on, near, or with forklifts. Operators must be certified.
Trenching and Excavation Safety Program (Use of Excavation Permits per Cal-OSHA)	C, O, M	Employees involved with the conduct of trenching or excavation.
100% Fall Protection Program	C, O, M	Employees required to use fall protection.
Scaffolding Safety Program	C, O, M	Employees required to erect or use scaffolding.
Hoisting and Rigging Safety Program	C, O, M	Employees responsible for the oversight or conduct of hoisting and rigging.
Crane Safety Program	C, O, M	Employees supervising or performing crane operations.
Flammable and Combustible Liquid Storage and Handling	C, O, M	Employees responsible for the handling and storage of flammable or combustible liquids or gasses.
Hot Work Permits	C, O, M	Employees performing hot work.
Hazardous Energy Control (Lockout/Tagout)	C, O, M	Employees performing lockout/tagout.
Electrical Safety	C, O, M	Employees required to work on electrical systems and equipment.
Permit Required Confined Space Entry	C, O, M	Employees required to supervise or perform confined space entry.
Hand and Portable Power Tool Safety	C, O, M	All.
Housekeeping Policy and Program	C, O, M	All.
Hearing Conservation	C, O, M	All.
Safe Lifting Program	C, O, M	All.
Safe Driving Program	C, O, M	All.
Hazardous Substances Program (Hazard Communication)	C, O, M	All.
Pressure Safety	C, O, M	Employees supervising or working on pressurized systems or equipment.
Line Breaking Safety	C, O, M	Employees performing general maintenance or working on pressurized systems or equipment.
Relief Valve Maintenance and Testing	C, O, M	Employees performing maintenance or testing of relief valves.
Respiratory Protection Program	C, O, M	All employees required to wear respiratory protection.
Fire Prevention Program	C, O, M	All.
Fire Protection Program	C, O, M	All.
HAZWOPER/First Responder	C, O, M	Employees working around hazardous materials or waste.

C = Construction Phase.
O = Operational Phase.
M = Maintenance Activities.

Construction IIPP. The Applicant will prepare a Construction IIPP that will include the following elements:

- A written Code of Safe Practices that relates to construction operations.
- Identification of the responsible persons.
- A system for identifying workplace hazards and routine safety inspections.
- Periodic meetings of supervisors or management to discuss safety problems.
- A system ensuring employee and subcontractor compliance.
- Routine "tool box" or "tailgate" meetings.
- Methods of communicating with employees.
- Procedures for promptly correcting unsafe conditions.
- Record keeping procedures.
- Injury and accident investigation and reporting.

It is anticipated that adherence to these standard operating procedures will minimize the potential for worker safety incidents and lessen the impact of incidents that do occur.

Operational Phase

Operational Safety Plan. The Applicant will prepare an Operational Safety Plan prior to beginning operations at the site. The Operational Safety Plan will include a Code of Safe Work Practices that all employees will follow. The Safety Plan will also include a job hazard analysis, use of PPE, a safety training program, an Emergency Response Plan, fire suppression and prevention plan, identification of fire suppression support services to be used, and fire suppression equipment and detection systems.

Operational IIPP. The Applicant will prepare an Operational IIPP which will comply with the provisions of CCR Title 8, Section 3203. The written IIPP will contain the following information:

- Identity of the responsible person(s).
- Ensuring compliance with safe and healthy work practices to include, but not limited to:
  - -- Lighting per ANSI/Illumination Engineering Society (IES) – RP-7 "American National Standards Practice for Industrial Lighting"
  - -- Smoking in designated areas only
  - -- Lockout and tagout procedures
  - -- Confined space entry procedures
  - -- Hot work procedures
- A system for facilitating employer-employee communications.
- Procedures for identifying and evaluating workplace hazards.
- Methods for correcting unhealthy/unsafe conditions.
- A training program for new, transferred, or promoted employees.

- A training program for starting new processes and/or equipment.
- Documentation of inspections and training for three years.

Note that many mitigation measures related to worker safety are proposed in Section 5.12 (Hazardous Materials Handling) and Section 5.13 (Waste Management).

5.14.3 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to worker safety are anticipated from the proposed project.

5.14.4 Cumulative Impacts

Worker safety programs are developed and implemented independently for TPP and will have no impact on other nearby projects or programs. Construction and operation activities and procedures will not cause or contribute to significant cumulative impacts on worker safety.

5.14.5 Applicable Laws, Ordinances, Regulations and Standards (LORS)

Design, construction and operation of TPP including transmission lines, pipelines, and ancillary facilities will be conducted in accordance with all LORS pertinent to worker safety. Project compliance with LORS is summarized in Table 6.1-1.

The following LORS are applicable or potentially applicable to the proposed project in the context of the public and occupational safety and health protection measures addressed in this section (5.14, Worker Safety), and in Sections 5.12 (Hazardous Materials Handling), and 5.15 (Public Health).

5.14.5.1 Federal Authorities and Administering Agencies

Occupational Safety and Health Act of 1970 (OSHA), 29 USC § 651 *et seq.*; 29 Code of Federal Regulations §§ 1910 *et seq.*; and 29 CFR § 1926 *et seq*. The authority establishes occupational safety and health standards (§ 1910) [i.e., permissible exposure limits for toxic air contaminants (§ 1910.1000), electrical protective equipment requirements (§ 1910.137), electrical workers safety standards (§ 1910.269), and the requirement that information concerning the hazards associated with the use of all chemicals is transmitted from employers to employees (§ 1910.1200)] and safety and health regulations for construction (§ 1926). Subpart I of § 1910 and Subpart E of § 1926 address personal protective equipment.

Under the Operational Status Agreement of October 5, 1989 between the Federal Occupational Safety and Health Administration (OSHA) and the California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH), the state assumed full enforcement responsibility for most of the relevant federal standards and regulations, (55 Fed. Reg. 18610 (July 12, 1990); 29 CFR § 1952.172). Federal OSHA has retained concurrent enforcement jurisdiction with respect to certain federal standards including standards relating to hazardous waste at 29 CFR § 1910.120 (Id.)

The administering agencies for the above authority are the Fed-OSHA and the DOSH (or Cal-OSHA).

Department of Labor, Safety and Health Regulations for Construction Promulgated Under § 333 of the Contract Work Hours and Safety Standards Act, 40 USC 327 *et seq.* The code establishes safety and health regulations for construction. The requirements for this regulation are addressed in Title 8 California Code of Regulations, Chapter 4, Subchapter 4, General Construction Safety Orders.

The administering agencies for the above authority are Fed-OSHA and DOSH (or Cal-OSHA).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 USC § 9601 *et seq.*; 40 CFR Part 302. The Act prescribes notification requirements for any release of a reportable quantity of a hazardous substance, and notification of potential injured parties in connection with any release.

The administering agencies for the above authorities are the National Response Center and the Environmental Protection Agency, Region IX.

Emergency Planning and Community Right to Know Act of 1986, 42 USC §11001 *et seq.*; 40 CFR Parts 350, 355, and 370. This Act prescribes national inventory, reporting, and planning requirements with respect to "hazardous chemicals" and "extremely hazardous substances" as defined under federal law.

The administering agencies for the above authority are the California Office of Emergency Services and the Alameda County Environmental Health Department.

49 CFR Parts 172, 173, and 179. The code provides standards for labels, placards, and markings on hazardous waste shipments by truck (Part 172) and standards for packaging hazardous materials (Part 173) and tank cars (Part 179).

The administering agency is the California Highway Patrol (CHP) who is responsible for enforcement of the Federal Department of Transportation regulations.

5.14.5.2 State Authorities and Administering Agencies

California Labor Code Div. 5 Parts 1, 3, 6, 7; Title 8. These authorities prescribe general occupational safety and health regulations and standards in addition to the construction and industrial safety regulations, standards, and orders identified within the engineering categories addressed in Section 5.14, Worker Safety, of this AFC. TPP will comply with all applicable sections of 8 California Code of Regulations (CCR), Chapter 4, Subchapter 7 and the California Building Code (see Table 5.14-3).

The administering agency for the above authority is Cal-OSHA.

California Public Resources Code § 25523(a); 20 CCR 1752-1752.5, 2300-2309, and Chapter 2, Subchapter 5, Article 1, Appendix B. To assist in its evaluation of the potential public health impacts of a project, the CEC requires the preparation of a quantitative public Health Risk Assessment and offsite consequence analysis for aqueous ammonia.

The administering agency for the above authority is the CEC.

Table 5.14-3. Applicable Occupational Safety and Health Topics Prescribed by Title 8 CCR

Standard	Description
Occupational Safety and Health Standards 401 - 428	Definitions Administration Variances Appeals Officers Hearing Board
General Industry Safety Orders Title 8, Sections 3200 - 6184	Employee / Employer Communications Injury and Illness Prevention Program Emergency Action Plan Fire Prevention Plan Hazardous Materials Control of Hazardous Substances Hazard Communication Emergency Medical Procedures Personal Protective Equipment Airborne Contaminants Signs, Tags, Barriers Noise Levels Ventilation Flammable / Combustible Materials Handling and Storage Fire Protection Systems Machine Guarding Crane and Hoist Operation Heavy Equipment and Machine Operation Rigging Sanitary Facilities Traffic Safety Interface with other Contractors Miscellaneous Hazards, including hot pipes, compressed air system, relief valves, pipelines, loading docks
General Construction Safety Orders High Voltage Electrical Safety Orders Title 8, Sections 1500 - 1938	Construction Accident Prevention Plan Weekly Toolbox Meetings Traffic Accidents and Earth Moving Hoist Equipment Reinforcing Concrete Fall Protection and Scaffolding Electrical Installations Evacuation Plan and Procedures Fire Safety Airborne Contaminants Emergency Medical Procedures

Table 5.14-3. Potentially Applicable Occupational Safety and Health Topics Prescribed by Title 8 CCR (Continued)

Standard	Description
General Construction Safety Orders High Voltage Electrical Safety Orders Title 8, Sections 1500 - 1938 (Continued)	Personal Protective Equipment Hand and Power Tool Use Crane and Hoist Operation Pile Driving Illumination Housekeeping Excavations
Electrical Safety Orders Title 8, Sections 2299 - 2974	High Voltage Installation, Operation and Maintenance Low Voltage Hazards High Voltage Hazards
Unfired Pressure Vessel Safety Orders Title 8, Sections 450-560	Design and Construction Air Tanks Pressure Vessels other than Air Tanks LP Gas Systems Anhydrous Ammonia Safe Practices
Boiler and Fired Pressure Vessel Safety Orders Title 8, Sections 750-797	Design and Construction Installation Inspection Operation Repairs

California Health and Safety Code § 25500 to 25543.3; 19 CCR §§ 2720-2734. This code establishes inventory, reporting, business, and area planning requirements with respect to hazardous and acutely hazardous materials in accordance with the federal Emergency Planning and Community Right-to-Know Act of 1986. Generally, it requires that any business that handles a hazardous material or mixture, in amounts greater than specified thresholds, must establish and implement a business plan for emergency responses to a release or threatened release of the hazardous material or mixture.

The administering agencies for the above authority are the Alameda County Environmental Health Department and the County Fire Department.

California Health and Safety Code, Part 6, § 44300 *et seq*. The law requires that facilities which emit prescribed quantities of a criteria pollutant and which emit any quantity of a toxic air contaminant provide the local Air Pollution Control District an inventory of toxic emissions. Such facilities may also be required to prepare a quantitative Health Risk Assessment.

The administering agencies for the above authority are the CARB and the Bay Area Air Quality Management District (BAAQMD).

California Health and Safety Code § 25500 *et seq.*; Title 19, Division 2, Chapter 4.5. This authority establishes the CalARP Program, which merges the federal and state programs for the prevention of accidental release of toxic and flammable substances. This streamlined process should eliminate the need for two separate risk management programs to comply with the federal and state requirements.

The administering agencies for the above authority are the California Office of Emergency Services (OES), and the Alameda County EHD.

Uniform Fire Code, Article 80. The code includes provisions for storage and handling of hazardous materials. Considerable overlap exists between this code and Chapter 6.95 of the California Health and Safety Code. However, the fire code does contain independent provisions regarding fire protection and neutralization systems for emergency venting (§ 80.303, D, Compressed Gases). Other articles that may be applicable include Article 4, Permits, and Article 79, Flammable and Combustible Liquids.

The administering agencies for the above authorities are the CEC and Alameda County Fire Department.

5.14.5.3 Local Authorities and Administering Agencies

Alameda County Zoning Ordinance, Development Standards. The local rule requires new sources to comply with safety setbacks as required by Alameda County Fire Department.

The administering agency for the above authority is the Alameda County Public Works Department.

5.14.5.4 Industry Codes and Standards

National Fire Protection Association. Prescribes minimum requirements necessary to establish a reasonable level of fire safety and property protection from the hazards created by fire and explosion. Table 5.14-4 summarizes the NFPA standards that are potentially applicable to TPP. Typically, the standards apply to the manufacturers of the equipment.

Several industry codes and trade association standards exist that may be applicable to the TPP to assure worker safety and health. Table 5.14-5 provides a listing of potentially applicable industry codes and standards. Typically, the codes and standards are requirements for the manufacturers of the facility equipment.

The administering agencies for the above authorities are the CEC and the Alameda County Fire Department.

Table 5.14-4. National Fire Protection Association Standards Related To Fire and Explosion Hazards

Standard	Description
NFPA 1	Fire Prevention Code
NFPA 10	Portable Fire Extinguishers
NFPA 12	Carbon Dioxide Extinguishing Systems
NFPA 13	Installation of Sprinkler Systems
NFPA 14	Installation of Standpipe and Hose Systems
NFPA 15	Water Spray Fixed Systems
NFPA 20	Centrifugal Fire Pumps
NFPA 22	Water Tanks for Private Fire Protection
NFPA 24	Private Fire Service Mains and Their Appurtenances
NFPA 30	Flammable and Combustible Liquids Code
NFPA 37	Combustion Engines and Gas Turbines
NFPA50A	Gaseous Hydrogen Systems at Consumer Sites
NFPA 68	Explosion Venting
NFPA 69	Explosion Preventing
NFPA 70	National Electric Code
NFPA 72	National Fire Alarm Code
NFPA 78	Lighting Protection Systems
NFPA 291	Testing and Marking Hydrants
NFPA 496	Purged and Pressurized Enclosures for Electrical Equipment
NFPA 497	Flammable and Combustible Liquids Classification
NFPA 1961	Fire Hose
NFPA 1962	Care, Use and Service Testing of Fire Hose Including Couplings and Nozzles
NFPA 1963	Screws, Threads, and Gaskets for Fire Hose Connections
NFPA 2001	Clean Agent Fire Extinguishing Systems
NFPA 8501	Standard for Single Boiler Operation

Table 5.14-5. Applicable Industry Codes and Standards

American Association of State Highway Officials (AASHO)
American Institute of Steel Construction (AISC) Specifications
American National Standards Institute (ANSI)
American Petroleum Institute (API)
American Society for Testing and Materials (ASTM)
American Society of Heating, Refrigeration, and Air Conditioning Engineer (ASHRAE)
American Society of Nondestructive Testing (ASNT)
American Standards for Mechanical Engineering (ASME)
American Water Works Association (AWWA)
American Welding Society (AWS)
Asphalt Institute, Pacific Coast Division
California Building Code (CBC)
California State Fire Marshall (CSFM)
Heat Exchanger Institute
Hydraulic Institute Standards
Illumination Engineering Society of North America
Institute of Electrical and Electronic Engineers (IEEE)
Instrument Society of America (ISA)
Standards of Tubular Exchanger Manufacturers Association (TEMA)
Steel Structures Painting Council Standards (SSPC)
Underwriters Laboratories (UL)
Uniform Building Code (UBC)
Uniform Fire Code (UFC)
Uniform Mechanical Code (UMC)
Uniform Plumbing Code (UPC)

5.14.6 Involved Agencies and Agency Contacts

Contacts for agencies directly involved with regulatory requirements for TPP are presented in Table 5.14-6.

Table 5.14-6. Involved Agencies and Agency Contacts

Agency/Address	Contact/Telephone	Permits/Reason for Involvement
Cal-OSHA District Office 455 Golden Gate Ave., Room 1524 San Francisco, CA 94102	Staff (415) 703-5210 24 Hr Number (916) 263-2800	Trenching and Excavation Permit. Permit-to-Erect Fixed Tower Crane. Construction Permit (for buildings/ structures 36 feet or higher) Scaffolding Permit (for scaffolding 36 feet or higher) Construction Field Safety Plan and Injury and Illness Prevention Plan. Operational Field Safety Plan and Injury and Illness Prevention Plan. Personal Protective Equipment Program.
Oakland Pressure Vessel Unit District Office, Division of Occupational Safety and Health 1515 Clay Street, Suite 1302 Oakland, CA 94612	John Lemire Principal Safety Engineer (510) 622-3060 (510) 622-3063	Pressure Vessel Permit
Alameda County Office of Emergency Services 1300 Clay Street, Suite 400 Oakland, CA 94612	Duty Officer (510) 286-0895	Emergency Services and Disaster Preparedness Issues
Alameda County Environmental Health Department 1131 Harbor Bay Parkway Alameda, CA 94502-6577	Robert Weston Ariu Levi (510) 567-6700	Hazardous materials spills and/or releases.

5.14.7 Permits Required and Permit Schedule

Permits required and permit schedule for matters dealing with worker safety for the TPP are provided in Table 5.14-7.

Table 5.14-7. Permits Required and Permit Schedule

Permit/Approval Required	Schedule
Scaffolding Permit	30 days prior to start of construction.
Trenching and Excavation Permit	60 days prior to start of construction.
Permit-to-Erect Fixed Tower Crane	60 days prior to start of construction.
Construction Field Safety Plan and Injury and Illness Prevention Plan	60 days prior to start of construction.
Construction Fire Protection and Prevention Plan	60 days prior to start of construction.

Table 5.14-7. Permits Required and Permit Schedule (Continued)

Permit/Approval Required	Schedule
Construction Permit	60 days prior to start of construction.
Pressure Vessel Permit	30 days prior to start of operations.
Operational Field Safety Plan and Injury and Illness Prevention Plan	90 days prior to start of operations.
Personal Protective Equipment Program	90 days prior to start of operations.
Operational Fire Protection and Prevention Plan	90 days prior to start of operations.

5.14.8 References

American Conference of Governmental Industrial Hygienists (ACGIH). 2000. Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs).

California Code of Regulations. Title 8. "General Industry Safety Orders, Construction Safety Orders, and Electrical Safety Orders".

Code of Federal Regulations. Title 29 Part 1910. "Occupational Safety and Health Standards."

Code of Federal Regulations, Title 29 Part 1926. "Safety and Health Regulations for Construction."

National Fire Protection Association. 2000. *A Compilation of NFPA Codes, Standards, Recommended Practices and Guides.* Quincy, Massachusetts.

National Institute for Occupational Safety and Health. 1992. Health Hazard Evaluation Report, US Army Corps of Engineers, Ozark Power Plant, Ozark, Kansas. HETA-92-0243-2377.

National Safety Council. 2000. *Accident Prevention Manual. Administration and Programs Edition and Engineering and Technology Editions.*